

REMARKS

Reconsideration and removal or modification of the Election of Species Requirement set forth in the March 24, 2004 Office Action is respectfully requested.

In the present matter, the March 24, 2004 Office Action requires election between embodiment I (Figs. 1-4, 15 and 16), embodiment II (Figs. 5 and 6) and embodiment III (Figs. 7-14 and 17).

Reconsideration and removal of this Election of Species Requirement is respectfully requested for the reasons set forth below.

Although the Applicants agree that these embodiments are patentably distinct, as noted in the Office Action, it is also noted that MPEP 803 specifies:

“If the search and examination of an entire application can be made without serious burden, the Examiner must examine it on the merits, even though it includes claims to distinct or independent invention.”

In the present instances, it is respectfully submitted that this clearly applies, given the close relationship between the embodiments, as will be discussed below.

To begin with, it is noted that each of the three embodiments includes a semiconductor element 1, including pads 2, wherein the semiconductor element 1 is at least partially covered with a passivation film 3. Lands 5 are also provided which are connected to external terminals 8. Conductive wires 4 are also provided to connect the pads 2 and the lands 5. Finally, all three embodiments include an insulating film 7 interposed between the lands 5 and the passivation film 3. As discussed on page 8, line 18 et seq., by interposing the insulating film between the lands 5 and the passivation film 3 in this manner, deformation can be decreased in the device.

By virtue of the above noted common elements found in each of the three embodiments, it is respectfully submitted that the search of the three embodiments will, to a large extent, be coextensive. Similarly, the issues that will arise in the examination of these three embodiments will also, to a large extent, will be coextensive. As such, it is respectfully submitted that "the search and examination of [the] entire application can be made without serious burden", as set forth in MPEP 803. Therefore, reconsideration and removal of the election requirement between these three embodiments is respectfully requested.

With further regard to these three embodiments, it is also respectfully submitted that claim 5 is generic to all three of these embodiments. Claim 5 includes the above noted elements of a semiconductor substrate having pads, a passivation film, lands connected to external terminals, a wiring line and an insulating protective film formed on the semiconductor substrate in an area other than the external terminals. Since all of these elements are found in all three embodiments, identification of claim 5 as a generic claim is respectfully requested.

In addition to the above arguments for removal of the Election Requirement, it is respectfully requested that the particularly close relationship between the first and second embodiments (e.g., Figs. 1 and 5) be considered, and, at a minimum, that the Election Requirement be modified. Specifically, beyond including all of the common elements referred to above, each of the first and second embodiments also includes a projection (e.g., 6) which extends inside of an external electrode 8 to restrict distortion of the external electrode 8 due to thermal strain (e.g., see page 8, line 3 et seq.). As stated on page 29, line 14 et seq. of the specification:

“The fundamental structure of the semiconductor device of the second embodiment of the invention shown in Fig. 5 is similar to that of the first embodiment shown in Fig. 1.”

Indeed, as further stated on page 29, the primary difference between embodiment 1 and embodiment 2 is the detailed structure of the projection 6 shown in Fig. 5, which includes a narrower region 6b and an expanded portion 6a. Notwithstanding this difference, the fact remains that in searching for the projection 6 as shown in both embodiments, essentially the same search areas will have to be covered. Similarly, the issues during prosecution will be extremely closely related to one another. Therefore, at a minimum, modification of the Election Requirement is respectfully requested to combine embodiments 1 and 2 into a common embodiment. Regarding this, it is noted that new claims 13-16 have been added to more specifically define these two embodiments.

Further with regard to the first and second embodiments, it is also respectfully submitted that claims 1 and 2 are subgeneric claims for these two embodiments. As noted above, both of the first and second embodiments include a projection. Such a projection is generically claimed in both claims 1 and 2. New claims 13-16 further define the details of these projections, with claim 13 being subgeneric to both the first and second embodiments, claim 14 is specifically directed to the first embodiment and claims 15 and 16 are directed specifically to the second embodiment.

Notwithstanding the above traverse, in order to be fully responsive to the Election Requirement, Applicants hereby elect embodiment I, noting that claims 1, 2, generic claim 5, and claims 9-14 can be read on this embodiment.

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If the Examiner believes that there are any other points which may be clarified or otherwise disposed of either by telephone discussion or by personal interview, the Examiner is invited to contact Applicants' undersigned attorney at the number indicated below.

To the extent necessary, Applicants petition for an extension of time under 37 CFR 1.136. Please charge any shortage in fees due in connection with the filing of this paper, including extension of time fees, to the Antonelli, Terry, Stout & Kraus, LLP Deposit Account No. 01-2135 (Docket No. 500.39915X00), and please credit any excess fees to such Deposit Account.

Respectfully submitted,

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APPENDIX

ABSTRACT OF THE DISCLOSURE

[Problem] In a small semiconductor device having external terminals on a semiconductor element and a semiconductor module mounted with the small semiconductor device, disconnection of the external terminals is prevented when a temperature change occurs under the conditions that the semiconductor device is mounted on a printed circuit board. ~~[Solving means]~~ A To achieve this a projection is formed on a land which is an external terminal bonding area of the semiconductor device, and a protruded portion of the projection is bonded to the external terminal. An intervening portion of a protective film made of resin material is formed between the lands and semiconductor element.